



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,422	08/01/2003	Shaun L. Harris	200209136-1	4367

7590 08/11/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
HAMMOND, BRIGGITTE R	
ART UNIT	PAPER NUMBER
2833	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/632,422	HARRIS ET AL.
	Examiner	Art Unit
	Briggitte R. Hammond	2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 15-21 is/are allowed.
- 6) Claim(s) 1-8 and 10-14 is/are rejected.
- 7) Claim(s) 9 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 8/1/03 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/24/03
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6,10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Olson 5,599,192. Olson discloses an electrical connector assembly 100 for electrically coupling two components, said electrical connector assembly comprising: a socket 112 coupled to a first component (~~not shown~~), said socket having at least one segment 130 that includes at least a first conductive engagement member 182 arranged on a first side of a spatial gap and at least a second conductive engagement member 182 arranged on an opposite side of said spatial gap, said second conductive engagement member being electrically isolated from said first conductive engagement member; and a blade 110 coupled to a second component, said blade having at least one segment 118 that includes at least a first conductive pad 150 arranged on a first side of an insulator 146 and at least a second conductive pad 150 arranged on an opposite side of said insulator 146, and said blade having a width complementary to the spatial gap of said socket such that when said blade is inserted into said spatial gap said first conductive pad of said blade forms an electrical contact with said first conductive engagement member of said socket and said second conductive pad of said blade forms an electrical contact with said second conductive engagement member of said socket, wherein said first and second conductive pads of said blade are electrically

isolated from each other, and wherein said blade comprises first connector mechanisms 120 for electrically coupling said first conductive pad to said second component and second connector mechanisms 120 for electrically coupling said second conductive pad to said second component, wherein said first and second connector mechanisms are off-set from each other, as shown in fig. 6.

Regarding claim 2, the socket and blade each have a plurality of said segments.

Regarding claim 3, the plurality of segments of the blade are electrically isolated from each other and the plurality of segments of the socket are electrically isolated from each other.

Regarding claim 4, the socket comprises a plurality of said conductive engagement members 182.

Regarding claim 5, electrical contact is achievable between the first and second engagement members of said socket and the first and second conductive pads of said blade over a range of distances (see page 5 and 6) at which said first and second components may be arranged relative to each other.

Regarding claim 6, electrical connection is "achievable" between the first and second engagement members of said socket and the first and second conductive pads of said blade over a range of insertion distances by which said blade is inserted into the spatial gap of said socket, as shown in fig. 5.

Regarding claim 10, the first connector mechanisms 120 comprises pins on one side of said insulator that electrically couple the first conductive pad of the blade to said second component, and said second connector mechanisms 120 comprises pins on a

side of said insulator opposite said one side that electrically couple the second conductive pad of the blade to said second component, and wherein none of the pins of the first connector mechanisms are arranged directly across from any of the pins of the second connector mechanisms, as shown in fig. 6.

Regarding claim 11, the first and second components are circuit boards.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson. Olsen discloses the invention substantially as claimed. Regarding claim 13, Olsen is silent regarding the current rating of the contact. However, it would have been obvious to one of ordinary skill to modify the connector of Olsen by having at least one segment of the of the socket and blade having a current rating of approximately 25A per contact, *since it has been held that the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.*

Regarding claims 7 and 8, Olsen is silent regarding the distance of the wipe and the width of the blade. However, it would have been obvious to one of ordinary skill to modify the connector of Olsen by having the wipe be at least 60 mil and the blade width

approx. 1.5mm, *since it has been held that the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.*

Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson in view of Weber 4,818,237. Regarding claim 12, Olsen discloses the invention substantially as claimed. Olsen does not disclose one of the circuit boards being a power supply board. However, circuit boards being a power supply board is well known in the art as evidenced by Weber. Weber disclose a power supply board circuit board 11. It would have been obvious to one of ordinary skill to modify the connector of Olsen by providing a power supply board circuit board as taught by Weber to provide a voltage and current supply.

Regarding claim 14, Olsen discloses the socket and blade comprising at least three of the segments 130. Olsen discloses the invention substantially as claimed. Olsen is silent regarding the current rating of the connector. However, it would have been obvious to one of ordinary skill to modify the connector of Olsen by having the current rating of the connector at least 150A, *since it has been held that the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.*

Allowable Subject Matter

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 15-21 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: regarding claim 9, patentability resides, at least in part in the second conductive pad being arranged "directly opposite" the first conductive pad, in combination with the other limitations of the base claim and regarding claim 15, patentability resides, at least in part in the system comprising an electrical connector, power supply board and a circuit board, wherein the power supply board supplies electrical power to said circuit board via the electrical connector by conducting electrical signals of one polarity between the conductive engagement member of the socket and the first conductive pad of the blade and by conducting electrical signals of a polarity opposite the one polarity via the electrical contact between the second conductive engagement member of the socket and the second conductive pad of the blade, in combination with the other limitations of the base claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brigitte R. Hammond whose telephone number is 571-272-2006. The examiner can normally be reached on Mon.-Thurs. and Alternate Fridays from 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A Bradley can be reached on 571-272-2800 ext. 33. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brigitte R. Hammond

August 9, 2004